

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on 1/27/2010 has been entered. Claims 25, 33, and 40 have been amended. Claims 1-24 and 41 are canceled. Claims 42-47 are added. Claims 25-40 and 42-47 are still pending in this application, with claims 25, 33, and 40 being independent.

Response to Arguments

2. Applicant's arguments, see pg 7-8, filed 1/27/2010, with respect to 25-40 have been fully considered and are persuasive. The 35 USC 103 rejection of claims 25-40 has been withdrawn.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 40 and 42-47 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The specification does not clearly define a computer readable medium, therefore the medium may be reasonably deemed as a signal or carrier wave, rendering the claims non-statutory. It is recommended to amend the above claims to recite "non-transitory computer readable storage medium".

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 25-27, 29, 31-35, 37, 39-43, 45, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maggenti (US Patent No. 6,633,765 B1) in view of Kanterakis (US Patent No. 7,099,346 B1).

Regarding claim 25, Maggenti teaches an apparatus (fig. 8) comprising:

a first logical interface **(804)** configured to receive data from a first host **(col. 15 line 49 to col. 16 line 20)**;

a second logical interface **(802)** configured to transmit said data to one or more further hosts **(col. 15 line 49 to col. 16 line 20)**;

a processor **(806 col. 15 line 60 teaches managing multicast groups)** configured to define a group comprising one or more further hosts, wherein a further host is added to the group in response to the reception of a request **(col. 12 lines 33-67 teaches a base station receiving a request from a mobile device for joining a multicast group)**; and

a cache **(808 teaches a storage device for forwarding data)**,

wherein said apparatus is configured to forward the data to said further hosts in said group, and wherein the processor is configured to limit the group to further hosts situated at the same location **(col. 12 line 33-67 teaches the**

multicast group is limited to the geographic region of the serving base station).

However Maggenti does not expressly disclose a cache, wherein said apparatus is configured to store received data in the cache until a predetermined condition is met and, in response to the meeting of this condition, to forward the data to said further hosts in said group.

Kanterakis teaches in col. 3 lines 60 to col. 4 line 23 an RNC radio network controller that will store the received data in a buffer until a predetermined condition is met. In particular, Kanterakis teaches an accumulation timer for storing the receive packets in the buffer and upon expiration of the timer the data is forwarded to mobile devices. Kanterakis teaches in col. 14 lines 10-24 the RNC is comprised in a base station, therefore the base station is equated to the base station of Maggenti.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Maggenti to include utilizing a storing data until a predetermined condition. One would be motivated as such in order increase the efficiency of a network by removing bursty data transmissions (col. 3 lines 28-29).

Regarding claim 26, Maggenti teaches wherein one or both of a request and a file is transmitted between the apparatus and the first host via a cellular communications network **(col. 12 lines 33-67 teaches the base station**

and the mobile device are in a cellular network, where the mobile device sends requests to the base station) and the location of the further host is defined in terms of a cell, so that the group is limited to further hosts situated in an area covered by a single cell **(col. 12 lines 33-67 teaches the mobile devices are located in the same coverage area which is interpreted as a cell).**

Regarding claim 27, Maggenti teaches further configured to forward a file over a wireless communication network, being the last network element (base station 104) located before an air-interface in a file delivery path between the first host and one or more further hosts **(fig. 3, col. 12 lines 33-67 teaches a base station 104 to forward the file over the wireless network between the source and the mobile devices).**

Regarding claim 29, Maggenti teaches in col. 13 lines 1-14 a base station comprising a timer.

However Maggenti does not expressly disclose wherein the predetermined condition is one of the expiry of a time limit.

Kanterakis teaches in col. 3 line 60 to col. 4 line 22 an RNC (base station) which sets an accumulation timer as a predetermined condition.

See similar motivation as claim 25.

Regarding claim 31, Maggenti teaches further configured to receive requests from the further hosts via a first communication path and to forward data to the further hosts via a second communication path, separate from the first communication path (**col. 12 lines 33-67 teaches receiving requests from a first path and multicasting the data to a second network**)

Regarding claim 32, Maggenti teaches wherein the first communication path and the second communication path comprise separate networks (**col. 12 lines 33-67 teaches a first and second path in separate networks, also see fig.3).**

Regarding claim 33, Maggenti teaches a method comprising receiving a request for a file from a first host (mobile device) at a network element (base station) (**col. 12 line 33-67 teaches receiving a request for multicast data at a base station**);

retrieving the file from a second host (**col. 12 lines 33-67 teaches receiving the multicast data from the source**);

storing the file in a cache (**col. 15 lines 42-49 teaches a storage device 808 for storing data**) associated with the network element;

defining a group including the first host (**col. 12 lines 33-67 teaches adding the mobile to a multicast group**);

waiting for a period of time until a predetermined condition is met where **(col. 13 lines 10-14 teaches a time period as the predetermined condition)**, if further requests for said file are received by the network element from one or more other hosts before the period of time expires, then said one or more other hosts are added to the group **(col. 13 lines 1-52 teaches the base station includes a countdown timer for receiving a response from the mobile devices to join a multicast. Upon expiration of the timer, no responses to join the group will be admitted)**; and

forwarding the file to the first host and to any other hosts in said group, wherein the group is limited to the first host and other hosts situated at the same location as the first host **(col. 12 line 33-67 teaches forwarding the multicast data and limiting the multicast group to the geographic region of the serving base station)**.

However Maggenti does not expressly disclose storing the file in a cache associated with the network element.

Kanterakis teaches in col. 3 lines 60 to col. 4 line 23 an RNC radio network controller that will store the received data in a buffer (cache) until a predetermined condition is met. In particular, Kanterakis teaches an accumulation timer for storing the received packets in the buffer and upon expiration of the timer the data is forwarded to mobile devices. Kanterakis teaches in col. 14 lines 10-24 the RNC is comprised in a base station, therefore the base station is equated to the base station of Maggenti.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Maggenti to include utilizing a storing data until a predetermined condition. One would be motivated as such in order increase the efficiency of a network by removing bursty data transmissions (col. 3 lines 28-29).

Regarding claim 34, Maggenti teaches wherein one or both of a request and the file is transmitted between the network element (base station) and the first host (mobile device) via a cellular communications network (**col. 12 lines 33-67 teaches the base station and the mobile device are in a cellular network**) and another host is considered to be at the same location as the first host if it is situated in an area covered by the same cell (**col. 12 lines 33-67 teaches the mobile devices are located in the same coverage area which is interpreted as a cell**).

Regarding claim 35, Maggenti teaches wherein the file is forwarded over a wireless communication network, the network element (base station) being the last network element before an air-interface in a file delivery path between the second host (source device) and the first host (mobile device) (**fig. 3, col. 12 lines 33-67 teaches a base station 104 to forward the file over the wireless network between the source and the mobile devices**).

Regarding claim 37, Maggenti teaches wherein the predetermined condition is one of the expiry of a time limit (**col. 13 lines 1-14 teaches the expiration of a timer as the predetermined condition**).

Regarding claim 39, Maggenti teaches wherein the request is received via a first communications network (**col. 12 lines 33-67 teaches receiving a request at the base station over a wireless network**) and the file is forwarded via a second communications network (**col. 12 lines 33-67, fig. 3 suggest the file is forwarded from a source from either network 118 or 316**).

Regarding claim 40, Maggenti teaches a computer-readable medium (**storage 808 col. 15 lines 42-49**) storing computer-executable instructions that, when executed,

cause a network element (base station) at least to perform receiving a request for a file from a first host (mobile device) at the network element (**col. 12 line 33-67 teaches receiving a request for multicast data at a base station**);

retrieving the file from a second host (source device) (**col. 12 lines 33-67 teaches receiving the multicast data from the source**);

storing the data in a cache associated with the network element (**col. 15 lines 42-49 teaches a storage device 808 for storing data**);

defining a group including the first host (**col. 12 lines 33-67 teaches adding the mobile to a multicast group**);

waiting for a period of time until a predetermined condition is met (**col. 13 lines 10-14 teaches a time period as the predetermined condition**) where, if further requests for said file are received by the network element from one or more other hosts before the period of time expires, then said one or more other hosts are added to the group (**col. 13 lines 1-52 teaches the base station includes a countdown timer for receiving a response from the mobile devices to join a multicast. Upon expiration of the timer, no responses to join the group will be admitted**); and

forwarding the file to the first host and to any other hosts in said group, wherein the group is limited to the first host and other hosts situated at the same location as the first host (**col. 13 lines 1-52 teaches the base station includes a countdown timer for receiving a response from the mobile devices to join a multicast. Upon expiration of the timer, no responses to join the group will be admitted**).

However Maggenti does not expressly disclose storing the file in a cache associated with the network element.

Kanterakis teaches in col. 3 lines 60 to col. 4 line 23 an RNC radio network controller that will store the received data in a buffer (cache) until a predetermined condition is met. In particular, Kanterakis teaches an accumulation timer for storing the received packets in the buffer and upon expiration of the timer the data is forwarded to mobile devices. Kanterakis

teaches in col. 14 lines 10-24 the RNC is comprised in a base station, therefore the base station is equated to the base station of Maggenti.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Maggenti to include utilizing a storing data until a predetermined condition. One would be motivated as such in order increase the efficiency of a network by removing bursty data transmissions (col. 3 lines 28-29).

Regarding claim 42, Maggenti teaches wherein one or both of a request and the file is transmitted between the network element (base station) and the first host via a cellular communications network (**col. 12 lines 33-67 teaches the base station and the mobile device are in a cellular network, where the mobile device sends requests to the base station**) and another host (mobile device) is considered to be at the same location as the first host if it is situated in an area covered by the same cell (**col. 12 lines 33-67 teaches the mobile devices are located in the same coverage area which is interpreted as a cell**).

Regarding claim 43, Maggenti teaches wherein the file is forwarded over a wireless communication network, the network element (base station) being the last network element before an air-interface in a file delivery path between the second host (source device) and the first host (mobile device) (**fig. 3, col. 12**

lines 33-67 teaches a base station 104 forwarding the file over the wireless network between the source and the mobile devices).

Regarding claim 45, Maggenti teaches wherein the predetermined condition is one of the expiry of a time limit **(col. 13 lines 1-14 teaches the expiration of a timer as the predetermined condition).**

Regarding claim 47, Maggenti teaches the wherein the request is received via a first communications network **(col. 12 lines 33-67 teaches receiving a request at the base station over a wireless network)**, and the file is forwarded via a second communications network **(col. 12 lines 33-67, fig. 3 suggest the file is forwarded from a source from either network 118 or 316).**

6. Claims 28, 36, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maggenti and Kanterakis in view of Taylor (US Publication No. 2003/0043760 A1).

Regarding claim 28, Maggenti and Kanterakis teach an apparatus as the parent claim.

However Maggenti and Kanterakis do not expressly disclose wherein said apparatus comprises a router.

Taylor teaches in par. 5 a base station. Taylor further teaches in par. 5 the base station comprises a router.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Maggenti and Kanterakis to include a base station comprising a router. One would be motivated as such in order to route packets through the system par. 5.

Regarding claim 36, Maggenti and Kanterakis teaches a method as the parent claim.

However Maggenti and Kanterakis do not expressly disclose wherein the network element comprises a router.

Taylor teaches in par. 5 a base station. Taylor further teaches in par. 5 the base station comprises a router.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Maggenti and Kanterakis to include a base station comprising a router. One would be motivated as such in order to route packets through the system col. 4 lines 17-41.

Regarding claim 44, Maggenti and Kanterakis teaches computer readable medium as the parent claim.

However Maggenti and Kanterakis do not expressly disclose wherein the network element comprises a router.

Taylor teaches in par. 5 a base station. Taylor further teaches in par. 5 the base station comprises a router.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Maggenti and Kanterakis to include a base station comprising a router. One would be motivated as such in order to route packets through the system col. 4 lines 17-41.

Allowable Subject Matter

7. Claims 30, 38, and 46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. Any response to this action should be **faxed** to (571) 173-8300 or **mailed** to:

Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand delivered responses should be brought to:

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL MITCHELL whose telephone number is (571)270-5307. The examiner can normally be reached on Monday - Friday 8:00 am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag G. Shah can be reached on 571-272-3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. M./

Examiner, Art Unit 2477

/Chirag G Shah/

Supervisory Patent Examiner, Art Unit 2477